

## **Speech perception**

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This session will examine the notion of perceptual flexibility at two levels. During speech communication, listeners need to adapt to many different styles of speech: they hear speech produced by talkers with unfamiliar accents or non-standard articulation as well as speech that is degraded by many forms of noise or reverberation. Such perceptual flexibility is key to effective communication, yet we are far from having a clear understanding of how it develops during first language acquisition, how it is affected by the listener's language background or by the ageing process. We can also think of perceptual flexibility in terms of the substantial individual differences that are typically found in both speech intelligibility and in listeners' performance on more analytic speech-based tasks such as categorical perception tests. It has been known since the early days of experimental testing of speech perception abilities that individuals vary widely in (a) their overall performance and (b) the weighting that they give to different types of acoustic or linguistic information used to identify sounds or words. This is the case even within a 'homogeneous' participant group as determined by factors such as age range and language background. However, little attention has been given to trying to elucidate the causes of these individual differences; many decades on from these early studies, we still have little understanding of what makes a 'good listener'.

In this session, after a general introduction by Hazan, four papers will be presented that examine these different aspects of perceptual flexibility. Baese-Berk et al. examine the individual differences in speech perception that occur in different 'adverse' conditions: when listening to speakers with dysarthria or an unfamiliar accent. In addition to examining correlations across performance on different adverse conditions, they relate intelligibility scores to performance on linguistic and cognitive tasks. In her paper, Bent considers how the perceptual flexibility that enables us to efficiently deal with unfamiliar accents develops during language acquisition. Her study evaluates word intelligibility for unfamiliar accents in quiet and noise in children aged 5 to 12 years. Rather than the emergence of perceptual flexibility, Bruggeman and Janse examine how it is affected by advancing age in listeners aged 62-85 years. Their focus is on a different aspect of speech perception: they consider patterns in lexical activation that occur in older and younger adults when the speech signal is unreliable. Finally, focusing on phonetic categorisation tasks, Kingston et al. consider whether individual performance on these types of tests can be related to personality traits. This session will end with a group discussion.